

Open Groups: Adaptations in Implementing a Parent Training Program

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ARTICLE INFO	ABSTRACT
<p>Article type: <i>Original Article</i></p>	<p>Background: Programs that focus on positive parenting have been shown to improve parental attitudes, knowledge, and behaviors, and increase parent and child bonding. These programs are typically conducted in a closed group format. However, when individual or community needs are more immediate, programmers sometimes opt for an open group format. To determine the effectiveness of this adaptation to an open group format, the present study compared both groups on parental outcomes.</p> <p>Methods: Both closed and open group formats were offered and implemented between January 2009 and December 2012. Participants for both formats were recruited through similar means and the format placement for each family was determined by the immediacy of the need for an intervention, the time lapse until a new cycle would begin, and scheduling flexibility. Chi-Square analyses were conducted to determine demographic differences between the two groups and gain scores were calculated from the pre- and post-test AAPI-2 scales within a mixed MANOVA to determine group format effectiveness.</p> <p>Results: Though open groups contained higher risk families; parental outcome improvements were significant for both groups. All participants, regardless of group membership, demonstrated the same statistically significant improvements following completion of the program.</p> <p>Conclusion: Findings provide support for adapting group formats when necessary to fit community and individual needs.</p>
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Introduction

Many programs have been developed to strengthen families and foster positive parenting in the hopes of reducing child abuse and neglect and increasing positive parent child relationships (e.g., Strengthening Families Program, The Incredible Years, Family and Schools Together (FAST), and Creating Lasting Family Connections). Programs that

focus on positive parenting have been shown to improve parental attitudes, knowledge, and behaviors, as well as increasing parent and child bonding^{1,4}. These types of psycho-educational parenting programs are typically conducted in a closed group format where participants begin and end the program at the same time. However, when individual or

community needs are more immediate, programmers sometimes opt for an open group format in which programming runs continuously and participants may begin the intervention at any point in the curriculum. Group format (open group and closed group) can have impacts on the developmental process, group development, and program outcomes⁵⁻⁶. Open groups have been shown to develop more slowly since members come and go at different times⁷. However, since open groups tend to be more responsive to addressing immediate community needs and are routinely used in certain types of treatment, it is important to use evaluation findings to help validate this format's efficacy in comparison to the typically implemented and evaluated closed group formats.

Closed group format

Closed groups are the most common type of groups in which to implement psycho-educational programs and have been shown to have certain advantages for program implementation. They provide a structured framework with a set number of weeks and sessions allowing participants to have a common group experience from the beginning to the end of the program. This type of group experience has been found to provide a safe and consistent environment for participants to relate to and feel supported by others⁸. They are also thought to provide members with a greater sense of security due to the stability of the group's social environment⁹⁻¹¹. A closed group format also allows group facilitators to build upon past weeks and develop trust with their group members without the "disturbance" of group members entering and leaving the group on a continual basis. Furthermore, closed groups are considered more cost effective compared to individual therapy¹¹. The major disadvantage of the closed group format is the inability to immediately address community needs for intervention (i.e., the need for a waiting list) and possible retention issues that threaten the group process¹⁰⁻¹¹.

Open group format

An open group, also known as a "rolling" group allows members to join at any point in

the program cycle so that all participants neither begin nor end treatment at the same time¹². Specifically, members leave the group and "graduate" based upon the completion of all session topics and/or the completion of the prescribed number of weeks of the program¹³. Although most psycho-education parenting groups use a closed format, Klosterman, et al.¹⁴ found that open group therapy was used in nearly all community-based substance abuse treatment. Potential advantages of open groups include the avoidance of waiting lists, preclude group endings linked to lack of retention¹¹, and allows for the easier assimilation of new members⁷. An open group format can be particularly advantageous when clients need an immediate intervention and closed groups are not beginning a new cycle. Withholding services to these families by only considering a closed group program format could be considered an ethical concern when another potentially effective method of providing services could be used. Potential disadvantages of the open groups include the need for greater human and material resources and more intense participant management¹¹ as well as potentially a lack of member bonding which could lead to less effective results.

Efficacy of closed and open program formats

Most research on program efficacy has largely been implemented within closed group formats¹¹. This may primarily be due to the convenience of this format in that all subjects begin and end the program at the same time and attend on a unified and regular schedule. In contrast, open format programs may be more difficult to study due to the need to track each individual subject's start and end dates as well as overall dosage. However, there is a need to understand the potential efficacy of open groups since the open group format may be the most effective way to reach a wider audience with immediate and critical needs¹¹. Knowing what works in the "real world setting" in which open groups exist would allow practitioners and researchers to bridge the gap "between

treatment research and treatment-in-practice.” Although there has not been a lot of research on the efficacy of open groups, one study found that when comparing the effects of an open group to that of a closed group implementation of a treatment program for sexually abused girls, no significant differences were found. In fact, both group formats demonstrated significant improvements in comparison to the control group¹¹. This is a particularly important finding in informing programmers on the best way to address community needs.

Adapting the Nurturing Family Program into an open group format

The Nurturing Parenting Program (NPP) is a 15-week program targeted to parents with children ages 5-11¹. The program consists of a separate parent and child component conducted simultaneously with a break for a shared meal time. Trained facilitators of the NPP instruct both the parent and child program components. The concepts for the parenting component focus on nurturing relationships within the family and include the following lessons: development of empathy, appropriate developmental expectations, positive discipline practices, self-nurturing and promotion of self-worth, and self-awareness and acceptance of all family members.

The concepts of the child component are designed to complement the lessons of the parent component and include the following: morals and values, receiving and giving praise and criticism, communication skills, personal empowerment and self-acceptance, identifying feelings, decision making (choices and consequences), anger management, refusal skills, body image, sexual abuse, substance abuse, and how to ask for help. To improve retention and compensate for transportation and childcare costs, Virginia’s Middle Peninsula Northern Neck Community Services Board (MPNNCSB) awards a \$10.00 stipend per session to families that complete a minimum of 80% of the program.

After implementing the NPP, as intended by the developers for three cycles, it became apparent to MPNNCSB that they could not serve the growing and immediate needs of their 10 county communities within the confines of a closed group format. Several families that attempted to attend the 15 consecutive sessions of the NPP over 15 weeks had difficulties due to last minute work schedule changes or a scheduling conflict with another court ordered class. Therefore, many parents missed certain sessions and topics offered in the program. Additionally, referral agencies (Courts, Department of Social Services) wanted clients to start the program immediately, but depending on where the cycle of the NPP was when they were referred, future participants would have to wait between two and 14 weeks to begin the program. Due to these difficulties, adaptations were made to conduct the program in an open or continuous format, incorporating new participants as needed, to meet the needs of their communities.

The adaptation

To change the format of the NPP, MPNNCSB needed to make some difficult decisions in an attempt to balance the fidelity of the NPP program with the reality of available resources and participant barriers. With the closed group format, MPNNCSB had been implementing approximately five cycles per fiscal year. To run an open group format every week for 52 weeks a year, MPNNCSB required a greater availability of staff and space than was necessary for the less frequent cycles of the closed group format. For this reason, a central location was selected to implement the program for the ten counties. In order to meet the increased need for resources, stipends for attendance were eliminated and fees for services were established. To help offset the cost to lower-income participants, social service agencies that referred their clients to the program offered some financial assistance with the program fee and MPNNCSB negotiated the cost of the program on a case-by-case basis if fees became a barrier to participation.

In another difficult decision to reduce costs, the child component of the program was eliminated so that the program became less family skills training and more parent skills training. Although the program developer, indicated in personal communication on March 23, 2009 that this adaptation was not in compliance with the program's fidelity; he also spoke of the program's strength of flexibility to adapt to different situations. While the family skills training approach is desirable in that it includes the child as part of the change process, many parenting programs effectively impact family interactions through a top-down approach of teaching communication and discipline skills to parents¹⁵⁻¹⁶. Thus, MPNNCSB decided that it was better to only reach the parents than to not offer the program at all. Overall, with the exception of the group format, the implementation of the parenting component of the NPP in the open group format retains the fidelity to the curriculum of the original program. Family skills training in the open group format is encouraged through homework assignments.

The study

Bavolek and his colleagues market the NPP as being flexible in meeting the needs of different populations. The program has been adapted for different cultures including Hmong, Hispanic, and African American families¹⁷, as well as high risk families including incarcerated parents and parents in substance abuse or other rehabilitative services⁴. However, no studies have been published examining adaptations of the implementation of the NPP and few studies to date have examined the efficacy of open group formats and their relationship to desired outcomes^{11,14}. The focus of this research was to compare the intended parental outcomes of the NPP with an open group format and with a closed group format to determine the efficacy of each group format. While Tourigny¹¹ found that open group formats were just as efficacious as closed group formats in treating adolescent girls who have experienced sexual abuse, it is unknown if this

finding would be replicated in a similar study for NPP.

Therefore a quasi-experimental study of NPP was proposed to explore the differences in parenting outcomes between an open and closed group format.

Materials and Methods

The efficacy of an open group format was explored through a quasi-experimental design comparing the parenting outcomes of open group format NPP participants to closed group format participants.

Nurturing Parents Program recruitment and format selection

Both open and closed format groups were offered and implemented between January 2009 and December 2012. Participants for both formats were recruited through advertising in local newspapers and radio stations, flyers distributed to public places, and brochures and class information at various community agencies/organizations including schools, Department of Social Services (DSS), Boys and Girls Clubs, churches, and the court system. The majority of referrals were received through DSS, schools, therapists, courts and probation officers. Families were given a choice of which format of the program they would like to attend. The format a family attended was typically determined by the immediacy of the need for an intervention, the time lapse until a new cycle of NPP would begin, and scheduling flexibility. Those with more immediate needs, conflicts in timing of a new NPP cycle, and less flexibility in family scheduling were more likely to choose the open format group. Both group formats provided a certificate of completion to parents that could be used as proof of participation for legal reasons or DSS mandates. Another difference between the two types of groups was that the closed group format provided a \$10 stipend for each session attended to help offset the cost of transportation and child-care costs with open group members having no stipend provided.

Participants

A total of 104 participants enrolled in the closed group format of the NPP and 76 (73%) completed at least 80% of the offered sessions. During the same time period, 121 participants enrolled in the open group format of the NPP and 53 participants (44%) completed at least 80% of the offered sessions. Demographics obtained from items on the Family Social History Questionnaire are reported for each program format group in Table 1.

Closed group format

The typical or “closed group” format of the Nurturing Parenting Program was funded through a State Strengthening Families grant provided by the State of Virginia. Middle Peninsula Northern Neck Community Service Board (MPNNCSB) implemented the program in its intended format; a closed, 15 session cycle with all participants beginning and ending the program on the same dates. Sessions lasted approximately two and one half hours with the first hour spent with parents and their children separately as they participated in their own group with programming targeted to each group. The following half hour was dedicated to a “family style” meal during which a brief five-minute parent-child activity was conducted and for the last hour, parents and children, once again, received separate programming. Homework and practice assignments were given in each session and were discussed in the following week’s session.

Open group format

The adapted “open group” format of the Nurturing Parenting Program was largely funded through user fees. The program was offered at MPNNCSB’s Prevention Services Division office. The open group format of the program allowed participants to begin the program at any session within the 15 Nurturing Parenting sessions and end when the cycle looped back around (e.g., a participant could start at session 6 and end at session 5 and still receive all of the curriculum).

Because the program is offered every week, missed sessions could be made up during the next 15-session loop, thereby allowing for increased flexibility in obtaining a completion certificate. Unlike the closed group format of the program, the open group format did not include a child component. However, the structure of the parent component of the program remained similar to that of the closed format. The program also ran for two and a half hours with the first 15 minutes dedicated to registration and fee procurement. Parents were provided the same curriculum as the open group with the main difference being that meals were not provided and parents were asked to conduct the brief five-minute parent-child activity at home with their child.

Evaluation procedures and assessment tools

Prior to participation in the NPP, all parents were assessed for demographic family risk and protective factors. Participating parents completed the Family Social History Questionnaire that was included with the NPP curriculum. Items in this questionnaire focused on family demographics (age, gender, income, education level, etc.), perceptions of childhood abuse by family members, and reports of child abuse in their current family. Referral sources were also recorded at this time. In addition to demographic information, parent participants completed a survey prior to beginning the program and again at the end of 15 sessions.

The survey was the Adult Adolescent Parenting Inventory-version 2 (AAPI-2)¹⁸ and is provided with the NPP curriculum to assess changes in knowledge, attitudes, and behaviors concerning parenting skills. More specifically, the AAPI-2 is a 40-item assessment tool that has been found to be a useful measure of treatment effectiveness. It is written at a fifth grade reading level and alternate test forms (Form A and B) are provided for pre and post-testing in order to reduce practice effects.

Table 1: Demographics for graduated participants in the closed and open program formats

Demographic	Closed group		Open group	
	n	percent	n	percent
Gender	76		53	
Male		22		43
Female		78		57
Age	76		51	
13-19		7		0
20-29		21		49
30-39		32		28
40-49		24		24
50+		17		0
Race	76		53	
Caucasian		66		87
African-American		33		6
Native American		0		2
Hispanic		1		4
Other		0		2
Marital Status	75		53	
Married/living together		44		49
Single/divorced/separated		56		51
Education				
Less than High School		12		9
High school degree		57		70
College		32		21
Annual household income	72		49	
Less than \$25,000		49		80
More than \$25,000		51		20
History of abuse as child				
By mother	76	18	53	19
By father	76	43	53	19
By other family	76	21	53	21
Family violence				
Abuse by spouse	58	28	38	13
Abuse of spouse	57	9	38	13
Abuse of child by parent	68	16	52	15
Substance Abuse Problem				
Self past or present	76	16	53	26
Self current treatment	73	1	53	2
Family past or present	74	54	53	34
Number of dependent children				
0		15	6	
1-2		47	42	
3 or more		39	52	
Referral source	76		53	
Court ordered		17		49
DSS referral		14		30
Self-referred		67		8
Counselor or therapist		1		0
Unknown		0		13

Participants are asked to rate items on a five point Likert scale ranging from “strongly agree,” “agree,” “uncertain,” “disagree,” to strongly disagree.” The total possible score is 200. Factor analysis of the items identified five constructs or subscales related to parenting skills¹⁸ and descriptions of these

five subscales along with internal reliabilities are reported below.

AAPI-2 subscales

Parental expectations

A seven-item scale is used to assess parents’ understanding of the developmental

capabilities and limitations of children. The total possible score is 35, with high scores indicating more realistic perceptions of children's abilities. Reported internal reliability for both Form A ($\alpha = .82$) and Form B ($\alpha = .82$) is high.

Empathic awareness

A ten-item scale is used to assess parents' ability to demonstrate empathy toward the needs of their children. The total possible score is 50, with high scores indicating sensitivity and acceptance of children's needs that values their feelings and is more likely to discourage corporal punishment when disciplining. Reported internal reliability for both Form A ($\alpha = .80$) and Form B ($\alpha = .88$) is high.

Corporal punishment

An 11-item scale is used to assess parents' belief in the value of corporal punishment. The total possible score is 55, with high scores identifying parents who seek alternative strategies to corporal punishment and dislike the use of spanking as a form of discipline. Reported internal reliability for both Form A ($\alpha = .92$) and Form B ($\alpha = .92$) is high.

Role-reversal

A seven-item scale is used to assess the degree of parent-child role reversal in the family dyad. The total possible score is 35, with high scores identifying parents who have appropriate role clarification between themselves and their child in which children are allowed to "be children" rather than "pseudo care-givers." Reported internal reliability for both Form A ($\alpha = .85$) and Form B ($\alpha = .82$) is high.

Power and Independence

A five-item scale is used to assess parents' attitudes toward empowering their children by encouraging independence. The total possible score is 25, with high scores identifying parents who are cooperative in their parenting style rather than strict authoritarians. They value choice and open discussion rather than strict obedience. Reported inter-

nal reliability for both Form A ($\alpha = .80$) and Form B ($\alpha = .80$) is high.

Data analysis

Chi-Square analyses were conducted to identify demographic variables with significant differences between the two group formats. These variables were then examined for significant relationships to any of the AAPI-2 outcome variables. Demographic variables that were significantly related to any of the outcome variables with at least a typical effect size ($r \geq .30$ as defined by Cohen, 1988) were identified as covariates.

A mixed or doubly multivariate analysis of variance (MANOVA) was performed to determine if there were differences between participants in the closed and open group formats in the amount of change that occurred over time in the scores on the five AAPI-2 scales. This analysis examined parenting outcomes for knowledge, attitudes, and behaviors between the two format groups, looking specifically for an interaction between time and group format that would demonstrate that one group format is more effective than is the other one in achieving NPP objectives.

Finally, an additional Chi-Square analysis was conducted to determine differences in retention rates between the closed and open group formats. An examination of the total time within the program until graduation was also conducted using independent t-tests to determine differences between the groups in the time it took to complete the program.

Results

Group differences and identification of covariates

Group differences could potentially impact program outcomes; thus comparisons between the two groups were conducted on the demographics for the 129 participants who graduated from the program (76 in the closed format and 53 in the open format). These analyses revealed four statistically significant differences for participants' gender ($\chi^2 = 6.45$, $df = 1$, $N = 129$, $P < .05$), ethnic-

ity ($\chi^2 = 16.20$, $df = 4$, $N = 129$, $P < .01$), income ($\chi^2 = 5.95$, $df = 1$, $N = 121$, $P < .05$), and referral source ($\chi^2 = 50.94$, $df = 4$, $N = 129$, $P < .001$). They also revealed some significant differences in risk factors such as abuse as a child (by father) ($\chi^2 = 14.88$, $df = 3$, $N = 129$, $P < .01$), spousal abuse ($\chi^2 = 7.13$, $df = 2$, $N = 96$, $P < .05$), and family history of drug abuse ($\chi^2 = 6.60$, $df = 2$, $N = 127$, $P < .05$). As seen from the frequencies reported in Table 1, the open group format participants were more likely to be Caucasian males with an annual household income less than \$25,000 and be court ordered or DSS referred to attend the program. The closed group format participants were more likely to have been abused by their father as a child, experienced spousal abuse, and have a family history of drug abuse. Finally, as expected from an open format where partic-

ipants make-up missed sessions on their own time without a set deadline, the open group format members took significantly longer to graduate, $t(127) = 7.95$, $P < .001$, ($n = 53$, $M = 209$ days, $SD = 118.43$) than did the closed group ($n = 76$, $M = 101$, $SD = 5.55$). The standard deviations also reveal that the open group format participants had much greater variation in the time it took individuals to complete the program than did the closed group format participants. Correlations coefficients for these significant group differences revealed that ethnicity, abuse as a child (by father), and family history of drug abuse were significantly related to at least one outcome variable. The effect sizes for all three of these variables were smaller than typical (Cohen, 1988) and therefore were not retained as covariates to be used within the doubly-MANOVA.

Table 2: Mean and standard deviation of pre and post-test AAPI scale scores for open ($n = 52$) and closed ($n = 75$) group participants

Scales	Mean Pre-Test Score	Mean Post-Test Score
Open Format		
Expectations	20.79 (3.79)	23.12 (4.19)
Empathy	40.35 (4.68)	44.87 (4.62)
Punishment	43.08 (6.12)	48.77 (5.72)
Role Reversal	26.29 (4.40)	26.06 (4.42)
Power	20.31 (2.61)	20.62 (2.60)
Closed Format		
Expectations	20.15 (3.69)	22.36 (3.77)
Empathy	39.29 (4.84)	43.73 (4.55)
Punishment	39.61 (7.85)	45.53 (6.58)
Role Reversal	25.88 (4.99)	25.33 (4.70)
Power	20.24 (2.98)	20.51 (2.69)

The effect of group format on parent outcomes

A mixed multivariate analysis using a doubly-MANOVA or repeated measures MANOVA design was conducted to assess for main effects and interactions between the within subject variable (i.e., time) and between subject variable (i.e., group) for the five AAPI-2 scales. The analysis revealed a significant multivariate effect for the main effect of time, $F(5, 121) = 39.08$, $P < .001$,

but not for group format, $F(5, 121) = 2.13$, $P = .07$, or for the interaction between time and group format, $F(5, 121) = .05$, $P = .998$. Univariate analyses indicate that three of the five AAPI-2 scales, Expectations ($F(1, 9) = 35.42$, $P < .001$), Empathy ($F(1, 10) = 119.17$, $P < .001$), and Punishment ($F(1, 23) = 90.89$, $P < .001$) significantly account for the multivariate effect of time. Mean scale scores and standard deviations are reported in Table 2. These results demonstrate that all participants,

regardless of which group they were in, demonstrated the same improvements following the completion of the program.

Attendance and retention outcomes

While analyses did not indicate statistically significant differences between the two group formats in parenting outcomes, a significant difference was noted in retention rates. As seen in Table 3, a Chi-Square anal-

ysis revealed statistically significant differences in dropout rates (those who attended less than 80% of offered sessions) between the two group formats. Overall, more than one-half (56%) of the enrolled participants in the open group format failed to graduate from the NPP, compared to less than one third (27%) of enrolled participants in the closed group format who did not graduate.

Table 3: Chi-Square analyses of retention rates between closed and open program formats

Variable	n	Program Format		χ ²	P
		Dropout	Graduate		
Retention					
Open Format	121	56%	44%	19.60	≤.01
Closed Format	104	27%	73%		
Totals	225				

Discussion

Results from this study demonstrate that the adaptation in program implementation from a closed group format to an open group format did not have a negative effect on parenting practice impacts of the NPP as measured by the AAPI-2. Overall, parent participants, regardless of which group format they received, improved their knowledge of child development, were more aware of their children’s needs, and practiced less corporal punishment as a discipline strategy following completion of the program. These findings are similar to those studies¹¹ that found no significant differences between the open and closed group formats for the outcome variables. The current study’s findings provide further evidence that both group formats can be equally successful in impacting parenting skills and addressing community needs.

However, while the evaluation did demonstrate equivalent impacts of the two group formats, there were significant differences found in terms of retention rates. Those in the open group format were less likely to

graduate from the program than those in the closed group format. Reasons for this difference may be numerous. The unstructured format of the open group format allows for greater flexibility in scheduling at the expense of greater time to complete the program. Those who miss more than 20% of the required NPP sessions must wait for the sessions to cycle back around in order to graduate. The time delay may contribute to dropout rates. Furthermore, there are differences in motivations to complete the program within the two formats. Since the open group format participants are more likely to be mandated by court order or DSS, their incentive to graduate may be more extrinsic than intrinsic, as they need a certificate of completion for legal reasons. Seligman¹⁹ asserted that involuntary participants in counseling have more extrinsic than intrinsic motivation, resulting in greater levels of resistance to change behaviors. If a participant’s court date occurs in the middle of the participation and the requirement is no longer necessary, the extrinsic motivation is no longer present and may result in the decision for many of these participants to drop out of the program. Finally, the closed group format provides cohesiveness and relationship

building, inherent in a consistent group of participants, which may enhance the basic curriculum through provision of support and story sharing⁸. Participant input becomes expected and the group depends upon one another to attend sessions and provide support⁹⁻¹¹. This level of interdependence is not as present in the open format of the program in which the group participants may change from week to week. Therefore, the pressure to attend each session and to graduate may be higher in the closed group format than in the open group format, resulting in greater levels of retention rates for the open format.

The issue of higher dropout rates in the open group format is a serious consideration when program professionals are making the decision as to which format of implementation would best serve the participants and community's needs. Solutions to the difficulty of retention rates and the benefits and challenges of each format are difficult and not always under a programmer's control. The removal of user-fees and the inclusion of stipends for both formats may potentially help, but this requires additional resources that are already limited for many programs when attempting to fund a more costly open format program. Another solution may be to remove self-selection of program format and deliberately provide more balance of mandated and voluntary participants in both group formats. However, this solution would compromise the ability of programmers to provide an immediate intervention for families who may be facing crisis, without the guarantee that the inclusion of intrinsically motivated families will have an impact on those that are attending for more extrinsic reasons. Finally, programmers may need to look to local legislators for policy changes that would enforce the completion of the NPP if the courts or DSS mandates it.

Additional challenges to interpretation of the current study's data were its quasi-experimental, archival nature with a lack of random assignment to experimental groups. Without random assignment, families in more immediate or critical need were natu-

rally selected to attend the open format group of the NPP, thereby, biasing family demographics for the two groups as previously described. At this time, it is unknown whether risk factors and referral sources (voluntary versus involuntary) may have an impact upon the effectiveness of the open group format of the NPP. Furthermore, the study focused on the comparison of two group formats, and while the impacts of improved parenting practices appeared to be equivalent from the data, without a control group for further comparison, it is impossible to determine if improvements in dependent variables were more, less, or the same as one might expect if no intervention was experienced at all.

Limitations of the data and the study

As one study noted¹¹, there are many difficulties in conducting open group formatted programs. Programmers must negotiate the costs and benefits of the various adaptations and their ultimate impacts upon program outcomes. Overall, the adaptations made to the open group format of the program did not appear to have negatively affected parent outcomes as measured by the AAPI-2; however, larger impacts upon family interactions and relationships remain unknown. Put differently, we are unable to determine from this study that the lack of child participation and potential lack of participant support in the open group format impacted actual behavior change, family relationships, and retention of positive impacts beyond what was measured by the AAPI-2. Conversely, we are unable to conclude if the lack of immediate intervention families in the closed group format that had to wait (possibly several weeks) for a new NPP cycle before receiving any intervention had additional negative or positive impacts.

Directions for future research and implications for prevention research

Findings from the current study are promising; however, future research should focus on overcoming some of the study's limitations. This would include random as-

signment of participants into experimental groups, and more comparable implementation of the program (i.e., either including or eliminating the child component in both groups). Furthermore, triangulation of the data, including input from the program facilitators and participating children would help invalidate the findings while qualitative data would help elaborate on the different successes of the two group formats. Qualitative data may also provide information on the larger impacts upon family interactions and relations as well as highlighting barriers to program completion and possible solutions to improve retention rates in both group formats. Continued research in this area is both timely and necessary given the “real life” practicality of open group format programming and the limited research on its effectiveness. This and other studies could be instrumental in informing programmers to better meet the needs of their clients and communities.

Conclusion

Findings from this study provide some initial support for the effectiveness of an open group format implementation of NPP so that a more immediate intervention can be provided while also increasing flexibility for participants. Program providers will need to carefully consider the needs of their community when determining the costs and benefits of adapting a closed group intervention to an open group intervention.

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Competing interests

The authors declare that there is no conflict of interest.

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